Westfield Public Works



ACTING TOWN MANAGER/ DIRECTOR OF PUBLIC WORKS BRUCE A. HAUK

TOWN COUNCIL

ANDREW COOK JOHN DIPPEL JACK HART ROBERT HORKAY JOSEPH PLANKIS ROBERT J. SMITH RONALD W. THOMAS

CLERK-TREASURER

CINDY J. GOSSARD

Memorandum

To: Westfield Town Council

From: Kurt J. Wanninger

CC: Bruce A. Hauk

Date: June 11, 2007

Re: Public Works Department Matters

Dear Members of Council, I would like to take this opportunity to update you regarding some of the activities that have taken place within the Public Works Department over the last month.

Fees Collected

(See Attachment 1)

Department Safety Statistics

(See Attachment 2)

HNTB Progress Report

(See Attachment 3)

Employee of the Month

The department's Employee of the Month selection for May 2007 was Leane O'Daniel. Leane has been with the Westfield Public Works Department since February of 2006. Leane is the Geographical Information's Specialist (GIS) Technician within the GIS Division. Please join me in congratulating Leane on this significant achievement.

Action Item #1 Ordinance 07-12 Amendments to Traffic Regulation Code - (Downtown Parking) - Second Reading

This Ordinance is being presented as a second reading.

Amendments to this ordinance consist of additional clarification to the alley locations and the addition of parking restrictions in the area of downtown Westfield (See summary of changes in ("Attachment #4 of this report, or Exhibit E,"). Specifically, in regards to the downtown parking restrictions, these additions establish 2 & 4 hour parking restrictions Monday through Saturday, with no parking restrictions between 2 & 6 a.m., Monday through Sunday. The areas designated are depicted in the ordinance in writing and in map form. Additionally, the parking restriction zones establish penalties, which are included in this Ordinance, that are enforceable by the Town of Westfield Police Department.

The Westfield Public Works Department has submitted a Request for Official Action to INDOT for the approval of the parking restrictions along SR 32. At this time INDOT has not ruled on the parking restrictions along SR 32. Therefore, any approval of this Ordinance Amendments that pertain to parking restrictions on SR 32 will need INDOT approval.

Therefore, the Westfield Public Works Department recommends these amendments to the Traffic Regulations Code to the Westfield Town Council for consideration for the second reading.

Action Item #2 (Award Wastewater Treatment Plant Building Expansion)

This Wastewater Treatment Plant (WWTP) Building Expansion project consists of a building expansion of 710 square feet that will be attached to the south side of the existing control building. This WWTP building expansion will provide office, meeting room, storage, and a SCADA Control Room for the operation of the Wastewater Plant.

Currently, the WWTP Supervisor and Plant Operator's office space and SCADA Controls are located in the WWTP Lab and the other portion of the lab is located in a hallway. This expansion will permit the office space and SCADA Controls to be separated from the WWTP lab equipment and chemicals, thus providing a safer environment away from the WWTP lab for the associates while conducting routine office work and operations for the WWTP. Additionally, this will provide the needed space to conduct lab work in a controlled room and environment.

The reason this building was not built as part of the WWTP expansion from 1 MGD to 3 MGD was due to the fact this was not part of the original scope and the proposed WWTP Office and Maintenance Building Expansion that was proposed with the expansion was cut from the original project, which was a 1.4 million dollar reduction in the overall project. Since this building expansion was not part of the original bid, which would have been a change in scope, and that the Department did get a competitive price from the successful contractor of the WWTP Expansion, the WPWD decided to wait until after the construction of the WWTP Expansion was complete and bid this project separately.

The engineer's estimate for this project was 200,000 dollars. The Westfield Public Works Department will be accepting bids for the Wastewater Treatment Plant Building Expansion on June 6, 2007.

The Westfield Public Works Department and HNTB staff will review the bid, contract, and supplemental information and the requirements as defined in the contract documents by the lowest, most responsible bidder.

Therefore, the Westfield Public Works Department at this meeting will make a recommendation to the Westfield Town Council to award a contract for construction of the WWTP Building Expansion.

Action Item #3 (Award Westfield Public Works Building Expansion)

The Westfield Publics Works Department has pursued a Design Build Proposal and Bid Process under the guidelines of Indiana State Law IC 5-30 for the purposes of selecting a contractor for the proposed Westfield Public Works Building Expansion.

This Building Expansion project includes the addition of approximately 17,700 square feet of building space to the east of the existing Westfield Public Works Department Building. This building expansion consists of three levels; a lower level, first floor, and second floor, each containing 5,900 square feet of space. The project also consists of the demolition of the existing salt storage facility/street barn and the construction of a new salt facility/ street maintenance building consisting of 3200 and 4400 square feet respectively. The project also includes the expansion of an existing street barn using materials from the demolition salt storage facility/street barn (3000 square feet), the expansion of existing bathroom facilities (400 square feet), and an expansion of the field crew training/break room into an existing utility building (1200 square feet).

These building expansions will not only provide the Public Works Department room for existing personnel, but also room for the Town's Community Development, the Information and Technology Departments and additional room for future employee additions to these departments.

The Westfield Public Works Department accepted proposals and bids for the Westfield Public Works Building Expansion on May 9, 2007 and opened the sealed bid proposals, which were then adjusted based on the quantitative scoring proposals to determine the lowest adjusted bid proposal on May 21, 2007.

Two reputable contract company teams submitted competitive bids for this contract; Paul I Cripe/Browning and Schneider/Patterson Horth. The engineer's estimate for this project was \$2.5 million dollars and Paul I Cripe/Browning bid for this project was 2.5 million dollars.

The Westfield Public Works Department and HNTB staff has reviewed Paul I Cripe/Browning contract and supplemental information and have determined that Paul I Cripe/Browning has met the requirements as defined in the contract documents.

Therefore, the Westfield Public Works Department recommends to the Westfield Town Council that the contract amount of \$2.5 million be awarded to the design build team of Paul I Cripe/Browning for the Westfield Public Works Building Expansion.

Action Item #4 First Reading - (Neighborhood Traffic Calming Policy)

This policy is being introduced to the Council for consideration as a first reading for the Town of Westfield Public Works to use consistently for recommended practices in planning, designing, and constructing neighborhood traffic calming devices for existing streets within the municipal jurisdiction of Westfield.

This policy has come forth due to various requests by the public to conduct traffic studies in subdivisions and to make recommendations on traffic control devices that will aid in the calming effect to reduce speeding. This policy establishes requirements for initiating a study, how the study will be conducted, and what type of recommendations may come forth as part of this study, and installation of such calming control devices.

These appropriate neighborhood traffic control devices should only be installed to address documented safety or traffic concerns supported by traffic investigations. These investigations will include an examination of the full array of potential actions beginning with a discussion with law enforcement officials concerning enforcement of existing controls.

This policy is attached as Exhibit #5 of this report.

Therefore, the Westfield Public Works Department recommends this policy to the Westfield Town Council as a consideration for a first reading

<u>Action Item #5 Equipment Purchase – (Track Loader and Harley Rake)</u>

The department is seeking approval to purchase a Track Loader and Harley Rake as part of the 2007 capital budget plan that was present to the Council in late 2006. The 2007 budgeted amount was \$45,000. This equipment will be used by the Street, Wastewater, and Water Divisions of the department.

The quotes were solicited for this equipment is as follows:

- 1. McDonald Machinery Co., Inc. (Takeuchi Loader w/ Harley Rake) \$51,350.00
- 2. McDonald Machinery Co., Inc. (Case Loader w/ Harley Rake) ----- \$52,407.00
- 3. MacAllister Machinery Co., Inc (Cat Loader w/ Harley Rake) ------ \$57,352.00

It is the recommendation of the department to the Council to propose a motion to approve the purchase from McDonald Machinery Co. Inc. for the purchase of the Takeuchi TL 140 Track Loader and Harley Rake for the amount, not to exceed, \$51,350.00.

Attachment#1

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Attachment #2

WESTFIELD PUBLIC WORKS MONTHLY ACCIDENT STATISTICAL REPORT FOR MAY 2007

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5/22/2007 Dwight Smith reported on 5/23/07 in the afternoon that he went home on 5/22/07 and had pain in his abdomen area effer building a fence Dwight went to Med Check and they found nothing wrong with him and returned him to full duty, no restrictions. Both incidents took approximately three hours time to be checked out at the clinic. Neither were OSHA recordabledables due to treatment not going beyond first aid.

Attachment #3

WESTFIELD TOWN COUNCIL MEETING June 11, 2007

HNTB Progress Report Executive Summary

1. <u>TIF Projects – The 146th Multi-use Path, Greyhound Pass and Western Way, 151st Street and East Side Access Road.</u>

The 147th Street/Greyhound Pass Traffic Signal project detailed cost breakdown was forwarded to WPWD that grouped areas of construction – paving, signal pole replacement, and new signal along with the analysis of traffic count data that indicated a traffic signal was warranted for this location in 2004. HNTB is completed preliminary design alternatives for the 151st Street and Carey Road intersection.

2. Traffic Impact Fee Study

Collection of existing Westfield and Washington Township data is nearing completion. The modeling effort continues using the Indiana Statewide Travel Demand Model (ISTDM). A meeting is scheduled for June 8, 2007, to present and discuss the existing level of service analysis with WPWD staff.

- 3. River Road Water Treatment Plant Expansion
 - A recommendation to award the project to Shook Construction was presented to the Council on May 14, 2007, and was approved by the Council. A notice to proceed will be issued to Shook Construction at the execution of the agreements, which is anticipated to be in early June.
- 4. Westside Interceptor
 - A recommendation to award the project to Atlas Excavating was presented to the Council on May 14, 2007, and was approved by the Council. A notice to proceed will be issued to Atlas after final approval of the bond sale is made by the Council, which is anticipated for mid June.
- 5. <u>2007 Resurfacing Program</u>
 - HNTB has prepared and submitted a final set of complete bid documents to the Town on May 25, 2007. The Town desires to issue an Addendum to the bid documents for bidding "Alternative" work groups based on the town's budget. HNTB will prepare an addendum and then send notice to the Contractors. Scheduled Bid Date is June 6, 2007.
- 6. Public Works Department Facilities Expansion
 - The joint venture of Browning Construction and Cripe (architects) has submitted the lowest adjusted price which is the numeric combination of bid price and qualitative proposal score. The final design-build contract is scheduled to be presented to the Town council for approval on June 11, 2007, pending successful negotiations.
- 7. Sycamore/Birch Storm Sewers
 - HNTB performed a preliminary stormwater analysis for the Sycamore / Birch Street area. The Town of Westfield and HNTB are in the process of working with a local contractor to establish the most practical and cost effective design for the Sycamore / Birch Street area.

TOWN OF WESTFIELD

HNTB PROGRESS REPORT for June 11, 2007 COUNCIL MEETING

The following covers HNTB activities for May 2007.

1. <u>TIF Projects – The 146th Multi-use Path, Greyhound Pass and Western Way, 151st Street and East Side Access Road.</u>

The 147th Street/Greyhound Pass Traffic Signal project was bid on April 4, 2007. Midwestern Electric, Co. was the low bidder for the project. HNTB sent a letter of recommendation on April 6, 2007. The bids were presented at the May council meeting for consideration. Concerns were expressed by the Council regarding the need for the signal and the replacement of existing poles. A detailed cost breakdown was forwarded to WPWD that grouped the areas of construction – paving, signal pole replacement, and new signal. The traffic counts and traffic signal warrant analysis were also reviewed for the 147th Street/Greyhound Pass traffic signal and forwarded to WPWD. Analysis of the data indicated that a traffic signal was warranted for this location in 2004.

HNTB completed preliminary design alternatives for the 151st Street and Carey Road intersection. Pending the selection of an intersection alternative, this project may be phased in order to obtain the necessary R/W. In any event, final plans for 151st Street will be completed, with or without the intersection at Carey Road, to meet an August construction start. This project will tie into the 151st Street project from Setters to Gray Road scheduled for construction completion prior to August 2007.

The Western Way/Greyhound Pass final plans are complete. R/W engineering will be completed by the first week in June and the appraising process has started. This project is scheduled for 2008 construction.

The final Change Order and the Certificate of Completion for the 146th Street Multi-use Path were forwarded to the town for signature on May 23, 2007. These documents will allow final payment to Calumet Asphalt Paving Co., Inc., for this work.

2. Traffic Impact Fee Study

Collection of existing Westfield and Washington Township road network, land use, and socioeconomic data is nearing completion. The preliminary road network and zone structure of the Westfield subarea model have been defined, and a procedure has been developed for extracting the subarea model from the Indiana Statewide Travel Demand Model (ISTDM). A procedure has also been developed for exporting data from the subarea model to perform level of service analysis based on the model outputs.

Current activities are primarily focused on evaluation of the existing road network to determine the existing level of service within the town, and development and refinement of the Westfield subarea model. Once complete, the subarea model will be used to project future traffic volumes. A meeting is scheduled for June 8, 2007, to present and discuss the existing level of service analysis with the Town of Westfield staff.

3. River Road Water Treatment Plant Expansion

A recommendation to award the project to Shook Construction was presented to the Council on May 14, 2007, and was approved by the Council. Agreements and bonds were forwarded to the contractor for execution. HNTB

will forward the agreements and bonds to Westfield for final approval and execution. A notice to proceed will be issued to Shook Construction at the execution of the agreements, which is anticipated to be in early June.

4. <u>Westside Interceptor</u>

A recommendation to award the project to Atlas Excavating was presented to the Council on May 14, 2007, and was approved by the Council. Agreements and bonds were forwarded to the contractor for execution. HNTB will forward the agreements and bonds to Westfield for final approval and execution. A notice to proceed will be issued to Atlas after final approval of the bond sale is made by the Council, which is anticipated for mid June.

HNTB has completed the wetlands permit applications for submittal to the Corps of Engineers and IDEM. It is anticipated that approval will be made by mid July.

5. 2007 Resurfacing Program

Preliminary recommendations were made to the Town for the proposed resurfacing project in early May. Rob Kmetz and HNTB narrowed the scope of proposed resurfacing work based on those preliminary recommendations and anticipated Town budget in mid-May. The final areas of work were confirmed and we prepared a final list of quantities and a construction cost estimate. HNTB has prepared and submitted a final set of complete bid documents to the Town on May 25, 2007. The resurfacing work includes the following:

- General Resurface Items including patching, paving, striping, shoulders, etc.
- Passing Blister Construction at SR 32 / Ditch Rd.
- Passing Blister Construction at Springmill / Greyhound Pass
- Intersection Improvements at 161st / Springmill

The Town desires to issue an Addendum to the bid documents for bidding "Alternative" work groups based on the town's budget. HNTB will prepare an addendum and then send notice to the Contractors. Scheduled Bid Date is June 6, 2007.

6. Public Works Department Facilities Expansion

The Public Works Building Expansion project is continuing through the process of selecting a design-build contractor. The joint venture of Browning Construction and Cripe (architects) has submitted the lowest adjusted price which is the numeric combination of bid price and qualitative proposal score. Consequently, Town staff has started negotiations with the company to arrive at more detailed specifications, preliminary plans and contract language based on the Town's needs. The final design-build contract is scheduled to be presented to the Town council for approval on June 11, 2007, pending successful negotiations. Because of the success of the design-build process chosen for this project, the design phase is approximately 40% complete.

7. Washington Woods Lift Station, Force Main and Gravity Sewer

The start up of the lift station was successfully completed during the first week of April. The Contractor has been requested to raise the height of the motor control center (MCC) and the generator to an elevation above the 100-year flood level. The contractor is scheduled to complete this work during the week of May 28, 2007. Once the modifications are made the contractor will make the remaining sewer tie-ins and begin final grading and clean-up. A meeting is scheduled with the contractor and Westfield Public School officials for May 30, 2007 to discuss grading and seeding schedules along the school property.

8. Wastewater Treatment Facility (WWTF) - Added Office / Lab Area

HNTB assisted the WPWD with preparing the final bid documents for the addition of the added office/laboratory area at the WWTF. Bids are due to be received June 6, 2007.

9. Cherry Tree Raw Water Main

After flushing and disinfection, new raw water line water samples have passed state-required bacteriological testing. New 3,600 lf 12" raw water line has been placed on line, receiving flow in parallel with existing 12" raw water line. Anticipated changes in well pump impeller configuration to match reduced pumping load will be performed by Town's pump contractor. New water line installation work one-year warranty continues through May 2008. Cherry Tree Road Water Line Easement Agreement documents have been reviewed and signed by grantors Martin Marietta and Wilfong Development. Easement descriptions allow for future power line and water line relocation, enabling Martin Marietta to develop future mining areas while WPWD's access to wells is preserved.

10. Sycamore/Birch Storm Sewers

HNTB carried out a preliminary stormwater analysis for the Sycamore / Birch Street area. The preliminary analysis results were used to approximate the retention pond and storm pipe sizes required to convey runoff associated with the 100 year return frequency rain event. HNTB estimated construction costs for two alternative stormwater systems. Costs were assessed for an underground storm system and a ditch / subsurface drainage system. The Town of Westfield and HNTB are in the process of working with a local contractor to establish the most practical and cost effective design for the Sycamore / Birch Street Area.

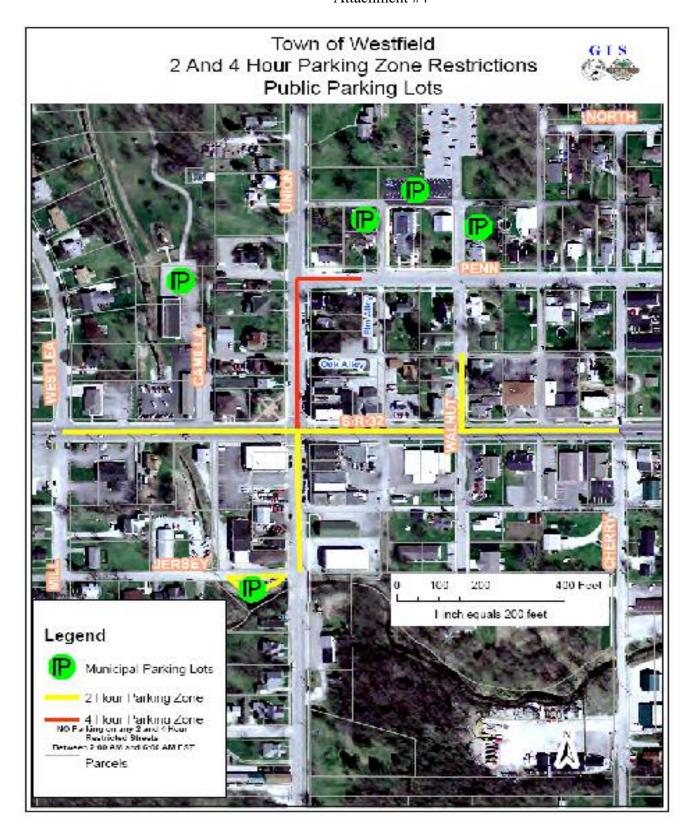
11. <u>US 31 / SR 32 Signal Pre-emption</u>

A fee proposal was provided to the Town for the design of Opticom Traffic Signal Preemption for emergency vehicles to be installed at 10 locations along US 31 and SR 32. HNTB will be providing design services and the town will provide inspection services. This project will be quoted. HNTB has requested existing design plans from INDOT.

12. Miscellaneous Assistance

HNTB is assisting WPWD with developer permitting for water and sewer.

This portion of the Progress report covers Bowen Engineering (BEC) / HNTB activities within the Performance Contracting (or Utility Energy Efficiency) Project. The only active project is the Greyhound Pass WTP. This new structure includes public restroom facilities that will be available to visitors on the Monon Trail. Design of an additional 300,000 gallon storage reservoir at 75% completion was reviewed in May by WPWD, Bowen Engineering, and HNTB to clarify Owner's desired features and function. Design was submitted in May to IDEM for review. Construction is anticipated to begin in June and be completed in fall 2007. When on line, the Greyhound Pass WTP and reservoir treats and pumps 400,000 gallons per day, enhancing water distribution and fire protection for the area west of U.S. 31. The plant will be on line this summer for peak usage as the tank is being constructed.



ORDINANCE 07-12

An Ordinance Of The Town Council Of The Town Of Westfield, Indiana, Amending The Westfield Code Chapter 58, Division 10. Figures, Sec. 58-346 Through Sec. 58-355

WHEREAS, Indiana Code 9-21-1 et seq. permits the Town of Westfield, Indiana, to adopt certain traffic regulations; and

WHEREAS, from time to time, as conditions change, the traffic regulations may need to change; and

WHEREAS, the Town Council has the authority to amend the Westfield Code; and

WHEREAS, the Town Council desires to amend Chapter 58, Division 10. Figures, Sec. 58-346 through Sec. 58-363 of the Westfield Code:

NOW, THEREFORE, BE IT ORDAINED by the Town Council of the Town of Westfield, Indiana, as follows:

<u>Section 1.</u> Chapter 58, Division 10. Figures, Sec. 58-346 through Sec. 58-363 of the Westfield Code is hereby amended by the deletion of the existing language and by the addition of the language which is attached as <u>Exhibit A</u> and incorporated herein.

Section 2. All prior ordinances or parts thereof inconsistent with any provision of this Ordinance are hereby repealed, to the extent of such inconsistency only, as of the effective date of this Ordinance.

Section 3. This Ordinance shall be in full force and effect from and after the date of its passage and such publication as is required by law.

ADOPTED THIS _____ DAY OF ______, 2007 BY THE WESTFIELD TOWN COUNCIL, HAMILTON COUNTY, INDIANA

WESTFIELD TOWN COUNCIL

Voting For	Voting Against	<u>Abstain</u>
Andy Cook	Andy Cook	Andy Cook
John Dippel	John Dippel	John Dippel
Jack Hart	Jack Hart	Jack Hart
Robert Horkay	Robert Horkay	Robert Horkay
Joe Plankis	Joe Plankis	Joe Plankis
Bob Smith	Bob Smith	Bob Smith
Ron Thomas	Ron Thomas	Ron Thomas
Attest:		
Clerk-Treasurer, Cindy		
This ordinance prepared	d by	

2706 East 171st Street • Westfield, IN 46074 • (317) 896-5452 • (317) 867-0202

Bruce A Hauk, Acting Town Manager

Attachment #5

NEIGHBORHOOD TRAFFIC CALMING POLICY

Town of Westfield

Approved – Month Date, 2007

I. PURPOSE OF TRAFFIC CALMING POLICY

The purpose of this document is to set forth the recommended practices in planning, designing and constructing neighborhood traffic calming devices for existing streets in the Town of Westfield. As defined by the subcommittee on Traffic Calming of the Institute of Transportation Engineers in 1997:

"Traffic Calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users."

The primary objective of traffic calming program is to create safer roads and a better quality of life for the neighborhoods that we live in. The strategic objectives for the Town of Westfield are:

- Reduce speeding
- Reduce accidents
- ♣ Improve driver behavior, concentration, and awareness
- ♣ Improve safety for pedestrians, bicyclists, children and motorists
- ♣ Reduce cut-through traffic
- Reduce stop sign running
- Reduce the need for frequent law enforcement

II. <u>IMPLEMENTATION PROCESS</u>

Appropriate neighborhood traffic control devices should only be installed to address documented safety or traffic concerns supported by traffic investigations. These investigations will include an examination of the full array of potential actions beginning with a discussion with law enforcement officials concerning enforcement of existing controls.

The Westfield Public Works Department (WPWD) will use the following process in order to determine the need for traffic calming and implementation for each independent neighborhood

request. The Town may also initiate a traffic calming project if a known problem may be best addressed using a traffic calming solution.

- **STEP 1:** Initial request made by petition (to be provided by Town) of at least **ten (10) percent** of the Property Owners/Neighborhood Association in a recorded or platted subdivision. The petition will be turned into the WPWD and assigned a case number.
- **STEP 2:** The WPWD will conduct a traffic investigation. The following shall be considered:
 - ✓ Street classification (from Thoroughfare Plan)
 - ✓ Traffic volumes (observed and/or counted)
 - ✓ Traffic Speeds (observed and/or measured)
 - ✓ Street width and geometry
 - ✓ Document observed safety problems
 - ✓ Review accident history, if readily available
 - ✓ Obtain input from Public Safety representatives (Police and Fire)
 - ✓ Consider safety and traffic calming alternatives and costs
 - ✓ Make recommendations for action or do nothing
 - ✓ Prepare Preliminary Implementation Plan Report
- **STEP 3:** Meet with the Property Owners/Neighborhood Association and/or conduct mail survey of directly affected area households (to be determined by WPWD).
 - If at least **seventy five (75) percent** of households in the directly affected area (or percentage to be determined acceptable by the WPWD) are in favor of action, go to Step 4.
 - If less than **seventy five (75) percent** of households in the directly affected area (or percentage to be determined acceptable by the WPWD) are in favor of action, send a written response to petitioners and/or neighborhood association stating no action will be taken at this time. A petition (to be provided by the Town) will be made available to the Property Owners/Neighborhood Association and/or households in the directly affected area for a follow-up survey.
 - If at least **seventy five (75) percent** of households in the directly affected area indicate that they are in favor of implementing the proposed action, go to Step 4.
 - If not approved, a written notification to Property Owners/Neighborhood Association, and/or directly affected area households stating that no action will be taken at this time. A new petition for traffic calming implementation will not be considered for a period of at least one year from the date the request was denied by the WPWD.
- **STEP 4:** A Traffic Advisory Committee (T.A.C.) that includes the Public Works Director, Engineer and Citizenry should be established to effectively develop the Traffic Calming Plan, and to monitor it's progress.
- STEP 5: Notify the Property Owners/Neighborhood Association, households in the directly

- affected area of the T.A.C. decision.
- Send written notification of the T.A.C. decision to the Property Owners/Neighborhood Association.
- **STEP 6:** Implement safety improvement and/or traffic calming measures. If a permanent improvement/traffic calming measure is installed, go to **Step 9**. If a temporary safety improvement/traffic calming measure is installed initially, it will be monitored for potential future permanent installation.
 - Notify households in directly affected area of implementation.
 - Order equipment and/or hire contractor.
 - Install temporary traffic calming measure.
- **STEP 7:** Observe performance of temporary safety improvement/ traffic calming measures for a period of at least 3 months. Prepare Evaluation Report.
 - If not working well, or causing other problems, notify directly affected area households and remove device. Revisit **Step 2**.
 - If working well, and not causing other significant problems, go to **Step 8**.
- **STEP 8:** For temporary traffic calming device installations, conduct survey of directly affected area households request vote on permanent installation.
 - If at least **seventy five (75) percent** of households in the directly affected area want a permanent installation; remove temporary installation for use at other potential locations. Install permanent device.
 - If less than **seventy five (75) percent** of households in the directly affected area want a permanent installation; remove temporary installation for use at other potential locations. Revisit **Step 2** or discontinue project.
- **STEP 9:** Monitor performance of permanent safety improvement/ traffic calming device for a period of approximately one additional year.
 - If not working well, or causing other significant problems, notify directly affected area households and remove device. Revisit **Step 2** or discontinue project.
 - If working well, and not causing other significant problems, close case!

III. DEFINITION OF TERMS

Directly Affected Area

Before any traffic calming devices can be installed, the WPWD will determine the geographic area directly affected by the proposed device. The criteria for selecting the *Directly Affected Area* will be set by the WPWD. Generally, the *Directly Affected Area* will consist of homes and businesses that do not have the option of avoiding the proposed device, or may be significantly affected by proposed changes.

Traffic Advisory Committee

The Traffic Advisory Committee (T.A.C.) consists of standing membership of the Public Works Director and Engineer and Citizenry. The goal of this committee is to review the findings and recommendations of WPWD staff. The T.A.C. shall approve staff recommendations unless the T.A.C. finds a valid reason not to accept the staff recommendation.

Street Classification

Local neighborhood streets only shall be considered for neighborhood traffic calming device applications. The streets under consideration for traffic calming devices should be residential in nature.

Traffic Volumes

Typically, neighborhood traffic calming devices should be installed on streets with less than 2,000 vehicles per day. All local residential streets in Westfield should meet this criteria.

Traffic Speeds

Neighborhood traffic calming devices should generally be installed on streets where the 85th percentile speed is 30 mph or greater or where safety problems exist. Speed measurements using radar or machine tube counters may be obtained.

Stop Sign Running

Stop sign running is a safety concern that may be addressed by increased law enforcement, removal of the stop sign, or removal and replacement of a stop sign with another traffic control/ traffic calming device.

Geometric Data

Neighborhood traffic calming devices should normally be used on streets with no

more than two travel lanes. The location of a traffic calming devise should be carefully considered. Generally, straight tangent sections of roads are the best locations for traffic calming devices such as speed humps.

Accident History

Using engineering judgment, it will be determined if the installation of traffic calming devices will result in a situation less safe than the original condition. Three-year accident history, when readily available, may be reviewed to assist in identifying any safety problems.

Public Safety Input

Public Safety agencies (Police and Fire) will be contacted to determine if services for emergency vehicles will be significantly affected by the proposed changes.

Alternative Traffic Calming Measures

Following is a list of alternative measures that should be considered and discussed with the petitioners. A description of these alternatives, which describes the measures, conditions, and circumstances for their use, is located in the next section.

- ♣ Thoroughfare Street Improvements/ Improved Signal Progression
- ♣ Speed Humps and Raised Intersections
- Pedestrian Crossings and Refuge Islands
- ♣ Street and Lane Narrowing using Pavement Markings
- Curb Radius Reduction
- Chicanes
- ♣ Traffic Circles/Roundabout
- ♣ Added bike lanes
- ♣ Rumble Strips

Evaluation Report

An evaluation of project effectiveness will be conducted within one year after implementation. At a minimum, speeds, accidents, and traffic volumes may be reviewed. The findings and recommendations should be documented in writing.

IV. <u>DESCRIPTION OF ALTERNATIVE MEASURES</u>

Thoroughfare Street Improvement and Improved Signal Progression Vehicles may travel through neighborhoods because thoroughfare streets are over capacity, traffic signals are not synchronized or other progression inefficiencies exist. Widening collector or arterial streets to add left turn lanes or additional through lanes or installing or synchronizing a signal system may improve vehicle safety and efficiency, and may reduce cut through traffic in

neighborhoods. The WPWD may conduct an investigation to establish potential improvements to the existing system if observed deficiencies exist.

Speed Humps and Raised Intersections

Speed humps and changes in grade at intersections can reduce vehicle speeds on local streets. The speed hump, speed table or raised intersection can be a raised area, constructed to Town Standards, extending transversely across the street from edge of pavement to edge of pavement. For local streets, speed humps typically are constructed with a longitudinal length of 14 feet. If speed tables are determined to be appropriate for neighborhood collector streets, they shall be constructed with a longitudinal length of 22 feet. These longer raised areas may also be considered on local service streets that serve as primary emergency response routes.

Other criteria to be applied prior to installation of speed humps, speed tables and raised intersections include:

☐ Signing/Marking: Speed humps are required to be signed with a
combination of signs and pavement markings to warn motorists and
bicyclists of their presence.
☐ Traffic Safety and Diversion: Any use of speed humps must take into
consideration the impact the installation will have on long-wheel-based
vehicles (fire apparatus, ambulances, snow plows and garbage trucks)
and the potential to divert traffic to other adjacent streets. Speed
humps should only be installed to address documented safety
problems or traffic concerns supported by a traffic investigation.
☐ Street Width: Speed humps should be used on streets with no more
than two travel lanes.
☐ Street Grade: Speed humps should only be considered on streets with
grades of 3% or less approaching the hump.
□ Drainage: Speed humps should be located where they will not affect the
proper drainage of the street.
☐ Street Alignment: Speed humps should not be placed within severe
horizontal curves or vertical curves (hills and valleys) that might result
in substantial horizontal or vertical forces on a vehicle traversing the
hump. Humps should be avoided within horizontal curves of less than
300 feet centerline radius and on vertical curves (hills/dips) with less
than the minimum safe stopping sight distance. If possible, humps
should be located on straight (tangent) sections of road rather than
curve sections.
☐ Sight Distance: Speed humps should generally be installed only where
the minimum safe stopping sight distance (as defined in AASHTO's A
Policy on Geometric Design of Streets or INDOT's Design Manual) can

be provided.

☐ **Traffic Speeds**: Speed humps should generally be installed only on streets where the posted or prima facie speed limit is 30 mph or less. Speed humps are not generally recommended, but could be considered on streets where the 85th percentile speed is in excess of 40 mph.

☐ **Traffic Volumes:** Speed humps should typically be installed only on streets with 2,000 vehicles per day or less. If considered for streets with higher volume, their use should receive special evaluation.

Pedestrian Refuge Island

Pedestrian refuge islands in the middle of the street provide a safe haven for pedestrians to cross the street. If placed at an intersection, the island will function as a diverter to restrict through traffic and reduce vehicle speeds. Some parking removal may be required and some residents may be inconvenienced. The median should be aesthetically pleasing.

Street and Lane Narrowing/ Choker

Motorists tend to drive at speeds they consider safe and reasonable and tend to drive more slowly on narrower roads and traffic lanes than wider ones. Reducing road widths by widening boulevards or sidewalks intermittently or introducing medians, striping for parking, shoulders or bike lanes or installation of "Neckdowns" can reduce traffic speeds. Road narrowing has the added advantage of reducing the expanse of road to be crossed by pedestrians, thus reducing pedestrian crossing time.

Other criteria to be applied and considered prior to street narrowing include:

☐ Bicycle Accommodations: On local streets designated as a bike route
or serving a significant volume of bicycle traffic, a sufficiently wide
bicycle lane should be provided through the narrowed area. Where
traffic and/or bicycle volumes are sufficiently low, exclusive bicycle
lanes may not be required.
☐ Snow Removal: The pavement width of streets shall not be narrowed
to a point where it becomes an impediment to snow removal.
☐ Parking Restrictions: In most cases on local access streets, street
narrowing will require the prohibition of parking at all times along the
street curb the full length of the narrowed section plus 20 feet. Refer to
the Town of Westfield Street Section Standards for parking prohibitions.
☐ Landscaping: Median landscaping can be selected by neighborhood
associations from an approved landscaping materials list provided by
the Town. Landscaping will be provided and installed by the Town and
will be maintained by the neighborhood association or landscape
volunteer. If the landscaping is not maintained, the median will be
seeded with grass.
☐ Median Width/Lane Width: Travel lanes should not be narrowed to a

width less than 10 feet, exclusive of gutter. Bicycle lanes where required shall be four feet wide exclusive of gutter, unless the gutter is poured integral to the bicycle lane, in which case the bicycle lane will be five feet wide. If parking is allowed, the parking and bicycle lane combination shall be a minimum of 13 feet.

Curb Radius Reductions/ Curb Extensions

The reduction of intersection curb radii is intended to slow turning vehicles and reduce pedestrian crossing path. The radius should accommodate a passenger vehicle. Usually a 10 to 20 foot radius will be required. Primary application is for local streets only.

Curb extensions (or bulbouts) are used at intersections to slow turning vehicles, reduce the length of crosswalks, and to slow the speed of through traffic. Added landscaping, which should not obscure necessary intersection sight distance, can also help to slow traffic by calling attention to the existing intersection.

Chicanes

Chicanes are a form of curb extension built at a 45-degree angle that alternate from one side of the street to the other. They will effectively reduce speed and decrease traffic volumes in the neighborhood. Chicanes can result in additional challenges for snow removal activities, especially if they are covered with snow.

Traffic Circles

Traffic circles are circles of varying diameter formed by curbs. Motorists must drive around the circle, or in the case of longer vehicles, drivers may drive slowly onto and over a mountable concrete curb forming the circle. Traffic circles reduce motor vehicle speeds through the intersections, depending on current intersection controls in place. A Design Plan must be prepared based on a field survey and certified engineer's drawing.

Other criteria to be applied and considered prior to installation include:

☐ Design Considerations: For each intersection the size of the circle will
vary depending on the circumstances for that specific intersection. In
general, the size of the circle will be determined by the geometry of the
intersection.
☐ Where intersecting streets differ significantly in width: It may be more
appropriate to design an elongated "circle" using half circles with
tangent sections between them. Smaller circles will be constructed on
a case-by-case basis. Normally the circle will be located as close to
the middle of the intersection as practical. Under special
circumstances, such as being on a Fire Department response route,
bus route or due to snow removal accommodations, the size and/or
location of the circle will be adjusted to more appropriately meet these
special circumstances.
□ Design Considerations for "T" Intersections: For "T" type intersections

all of the above design considerations apply. In addition, curb extensions (or curb bulbs) may be included along the top of the "T" at the entrance and exit to the intersection. ☐ **Signage:** Appropriate signage for traffic circles will be determined by the Public Works Manager and may vary based on the location of the circle. ☐ Channelization: Where curbs do not exist on the corner radii, painted barrier lines, defining the corners, should be installed. Yellow retroreflective lane line markers shall be placed on top of the circle at its outer edge. Refer to the most recent Town of Westfield Standard Detail Sheets. ☐ **Parking Removal:** Normally, parking will not be prohibited in the vicinity of the circle beyond that which is prohibited by the Town, i.e., "within the intersection" or "within 20 feet of a crosswalk area". However, where special circumstances dictate, such as where the circle is on a response route for the Fire Department or to accommodate snow removal, or in an area where there is an unusually high use by trucks, additional parking may be prohibited as needed. ☐ **Sign Removal:** At intersections where circles are to be installed, any previous right-of-way controls may be removed at the time of circle construction completion. However, where special circumstances dictate, the existing traffic control may remain in place or be otherwise modified at the direction of the Public Works Director. □ **Landscaping:** Landscaping will be selected by the affected Neighborhood Association from an approved landscaping materials list provided by the Town. Landscaping will be provided and installed by the Town and will be maintained by the Neighborhood Association. If the landscaping is not maintained, the traffic circle will be seeded with grass.

TRAFFIC CALMING MEASURES

NEIGHBORHOOD TRAFFIC MANAGEMENT DEVICES

Devices	Safety	Speed Reduction	Pedestrian, Bicyclists Access	Traffic Diversion	Noise	Exhaust Emissions	Emergency Services	Acceptable for Traffic Management
Police enforcement	Improvement	Depends on Amount	Possible Improvement	No Effect	No Effect	No Effect	No Effect	Yes
Speed Humps	Unknown	Yes	Mixed Results	Possible Improvement	Increase	Increase	Possible Problem	Yes
Education	Possible Improvement	Possible	Possible Improvement	N.A.	N.A.	N.A.	No Effect	Yes
Entrance Treatments	Possible Improvement	Unlikely	Possible Improvement	Mixed Results	No Effect	No Effect	Possible Problem	Yes
Curb extensions	Improve Ped X-ing	Unlikely	Yes	No Effect	No Effect	No Effect	Possible Problem	Yes
Partial Diverters / Diverters / Cul- de-Sac	Possible Improvement	Possible	Possible Improvement	Yes	Possible Reduction	No Effect	Possible Problem	Possible
Chicanes	Possible Improvement	Possible	Possible Improvement	Possible Improvement	No Effect	Small Increase	Possible Problem	Yes
Traffic Circles	Improved	Yes	Possible Improvement	Possible Improvement	No Effect	No Effect	Possible Problem	Yes

One-way Streets	Possible Improvement	No	Mixed Results	Possible Improvement	No Effect	No Effect	Possible Problem	Yes
Median Barrier	Possible Improvement	No	Mixed Results	Possible Improvement	No Effect	No Effect	Possible Problem	Yes
Improve Arterial Streets	Possible Improvement	Unlikely	Possible Improvement	Possible Improvement	Possible Improvement	Possible Decrease	No Effect	Limited
Traffic Control Devices: e.g. Prohibitory Signing	Possible Improvement	Unlikely	Possible Improvement	Yes	Yes	No Effect	No Effect	Possible

V. REFERENCES

- 1. Indianapolis Department of Public Works, *Neighborhood Traffic Calming Recommended Practices*, 1999.
- 2. Town of Avon, Indiana, Neighborhood Traffic Calming Program, http://www.city.bloomington.in.us/engineering/traffic/ntsp2.html
- 3. Institute of Transportation Engineers, *Traffic Calming for Communities*, http://www.ite.org
- 4. Institute of Transportation Engineers, *Traffic Calming, State of the Practice*, prepared by Reid Ewing, August, 1999.
- 5. City of Seattle, Washington, Neighborhood Traffic Calming Program, http://www.ci.seattle.wa.us./transportation/ntcphome.htm
- 6. City of Portland, Oregon, Traffic Calming Programs, http://www.trans.ci.pportland.or.us/trafficcalming/xxxx.htm
- 7. ITE Journal, *Traffic Calming Design Standards for New Residential Streets: A Proactive Approach*, prepared by Joseph E. Womble and W. Martin Bretherton, Jr., March 2003.
- 8. City of Madison, Wisconsin, Neighborhood Traffic Management Program http://www.ci.madison.wi.us/trafficEngineering/documents/Manual/RPT_2%20version%209_112205.pdf